

40.—*Citharina latissima* Loeblich and Tappan, n. sp.: 40a, Side view of holotype (U.S. N.M. no. 106150), showing low and broad chambers, thickened sutures, and low narrow ribs; 40b, edge view, showing compressed form.  $\times 20$ .

41.—*Turrispirillina spirella* Loeblich and Tappan, n. sp.: 41a, Dorsal view of holotype (U.S.N.M. no. 106177), showing globular proloculus and long, undivided second chamber; 41b, edge view, showing very low spire.  $\times 48$ .

BOTANY.—*Ectosperma*, a new genus of grasses from California.<sup>1</sup> JASON R. SWALLEN, U. S. National Museum.

A very unusual and striking grass was collected by Miss Annie M. Alexander and Miss Louise Kellogg in the course of exploration in Inyo County, California, early last summer. It was submitted to the author for identification by Dr. H. L. Mason, of the University of California. It was evident at once that the grass did not belong to any species known from the United States, and on further examination it proved to be not only a new species but a new genus. One of the characters is the free caryopsis which falls from the floret very early and easily, sometimes even before it is entirely mature. The generic name selected refers to this character.

*Ectosperma* Swallen gen. nov.

Spiculae paniculatae 3-7-florae, rachilla continua; glumae subaequales, spicula paulo breviores, 7-11-nerves; lemmata 5-7-nervia, exaristata, marginibus in parte inferiore dense villosa; palea lemma aequans, tenuis, ovata, truncata, nervis minute excurrentibus, marginibus latis dense villosa; caryopsis decidua; stylosum bases persistentes; hilum circulare, depressum; embryo latus ellipticus, caryopsi  $\frac{1}{3}$  brevior; styli elongati, stigmatibus plumosis.

Spikelets 3-7-flowered, the rachilla continuous, the florets persistent, crowded, successively smaller; glumes subequal, nearly as long as the florets, spreading, 7-11-nerved, some of the nerves faint; lemmas 5-7-nerved, awnless, densely villous on the margins in the lower half, sometimes also on the internerves; palea as long as or a little longer than the lemma, thin, broad, ovate, the broad margins densely villous with long hairs nearly to the summit, sparsely villous on the back at the base, the apex erose-truncate, the nerves excurrent in short awns; caryopsis readily

falling from the floret, elliptic, roughly rectangular in cross section, the style bases persistent as short points; hilum circular, depressed; embryo broad, elliptic, nearly two-thirds the length of the grain; styles elongate with the stigmas plumose on all sides; stamens 3.

Stiff perennial, apparently with long underground stems or rhizomes, relatively short, flat, stiff blades, and narrow, simple panicles of large, pale hairy spikelets.

*Ectosperma alexandrae* Swallen, sp. nov.

Culmi erecti, rhizomatosi (?), ramis fertilibus et sterilibus praediti; rami steriles internodiis brevibus nodis lanato-villosis et foliis densis instructi; rami fertiles graciliores, internodiis superioribus elongatis; vaginae dense ciliatae in ore et collo villosae vel eae remorum fertilium subglabrae; ligula 1 mm. longa, dense ciliata; laminae 4-14 cm longae, 3-6 mm latae, acuminatae, nervosae, glabrae, vel supra scaberulae; paniculae 4-10 cm longae, ramis brevibus, appressis, 1-3-spiculatis; spiculae 1-1.5 cm longae; glumae 9-14 mm longae, acuminatae, glabrae; lemma primum 8-9 mm longum, acutum vel mucronatum; caryopsis 4 mm longa, 2 mm lata, fusca; antherae 3.5 mm longae.

Culms erect with sterile and fertile branches; sterile branches stout with short internodes, lanate-villous nodes, and crowded leaves, the fertile ones more slender, at least the upper internodes elongate; sheaths rounded, densely ciliate, villous at the throat and on the collar, or those of the flowering branches nearly glabrous; ligule 1 mm long, densely ciliate; blades 4-14 cm long, 3-6 mm wide, acuminate, strongly nerved, glabrous, or scaberulous on the upper surface; panicles 4-10 cm long, the branches short, appressed, bearing 1-3 spikelets; spikelets 1-1.5 cm long, nearly as wide; glumes 9-14 mm long, acuminate, glabrous; first lemma 8 mm long, acute or mucronate; caryopsis 4 mm long, 2 mm wide, brown; anthers 3.5 mm long.

<sup>1</sup> Published by permission of the Secretary of the Smithsonian Institution. Received October 28, 1949.



FIG. 1.—*Ectosperma alexandrae* Swallen, gen. et sp. nov.

Type in the U. S. National Herbarium, no. 1963637, collected on lower slopes of big sand hill, Eureka Valley, Inyo County, California, alt. 3,050 feet, May 24, 1949, by Annie M. Alexander and Louise Kellogg (no. 5655).

Regarding the locality Miss Alexander writes: "The sand hill stands over 600 feet higher than the floor of the valley and is a ghostly looking mound seen from a distance. The dense tussocks of the coarse grass, scattered here and there, were

growing for a short distance up the north slope . . . the roots were deeply imbedded in the sand."

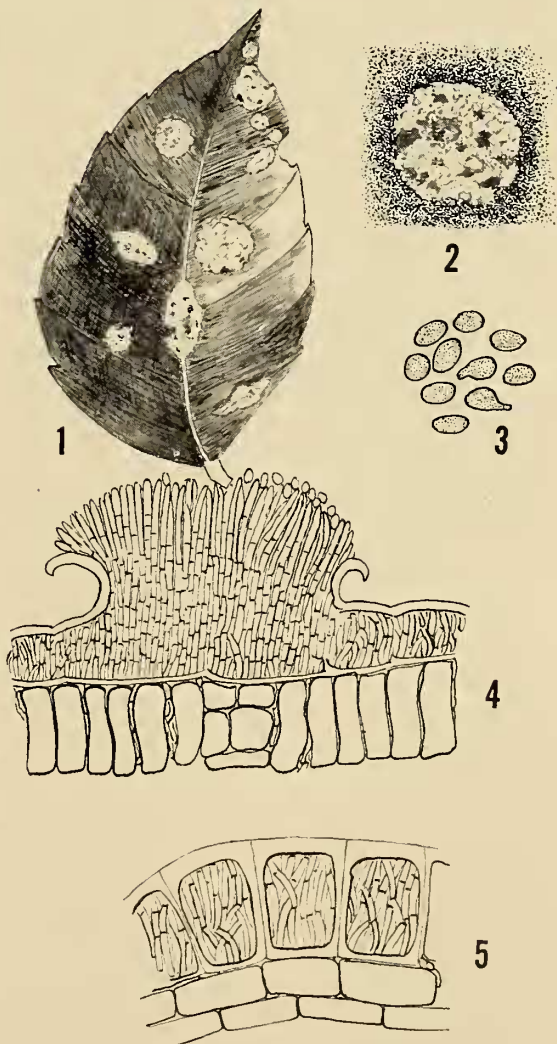
This genus belongs to the tribe Festuceae, although the glumes are nearly as long as the spikelet, which might indicate some affinity with the Aveneae. The characters are so distinctive that it is difficult to determine its actual relationship in the tribe. The appearance of the spikelets suggests *Tridens*, but the characters are completely different.

MYCOLOGY.—*Elsinoë viticola* from India.<sup>1</sup> M. J. THIRUMALACHAR, Hindu University, Benares, India. (Communicated by ANNA E. JENKINS.)

During the course of the studies on spot anthracoses in Mysore, South India, collections were made on *Tetrastigma sulcatum* Gamb. near Kemmangundi at an altitude of 4,800 feet above sea level. *T. sulcatum* is a climbing shrub belonging to the Vitaceae developing pedately compound leaves. The infection spots were noticed on the leaves in the form of circular patches. A cursory study indicated that the fungus was identical with *Elsinoë viticola* Racib. described by Raciborski (1900) from Java on *Tetrastigma coriaceum* (= *Vitis coriacea*), an account of which is presented by Bitancourt and Jenkins (1943).

The infection patches on the lamina of *Tetrastigma sulcatum* are at first chalky white with a corrugated surface. They are circular with sinuous outline, slightly more elevated than the leaf surface and coalescing with one another when in close juxtaposition. Some of the infection patches involving the midrib or the veinlets are more linear or elongated in outline, showing a tendency to spread in the same direction as the veins (Fig. 1). In older stages the infection patches gradually turn grayish brown with islands of black patches (Fig. 2). Raciborski described the infection patches bearing the ascomata of *E. viticola* as being chocolate-brown in color, and Arnaud (1925) described it as superficially resembling the patches of the parasitic alga *Cephaleuros virescens*.

Sections through the young infection indicated the *Sphaceloma* stage of the fungus, which is so far unknown. The initials of the acervuli are formed by the grouping of the



FIGS. 1-5.—1, Leaflet of *Tetrastigma sulcatum* showing infection spots of *Elsinoë viticola*, about three-fourths natural size; 2, enlarged view of the infection spot,  $\times 2\frac{1}{2}$ ; 3, conidia,  $\times 750$ ; 4, acervulus,  $\times 300$ ; 5, development of sori initials within the epidermis,  $\times 300$ .

<sup>1</sup> Received October 7, 1949.